



# Civil Engineering Preliminary Technical Subdivision Review Checklist

Log No: \_\_\_\_\_

Date: \_\_\_\_\_

Project:		
Location:		
Reviewed by:		Phone #

The purpose of the preliminary review process is to provide a simple listing of City engineering requirements for proposed projects. Please do not treat this review as a complete list of requirements; it is merely the civil engineering initial review and assessment.

The reviewer has circled the items applicable to this project and, where necessary, has provided additional comments. Any item determined not applicable, based on this conceptual review, is shown with a strikethrough across the item number. If you have any questions, please contact the reviewer noted above.

Contact Public Works General Services at 480-782-3336 for information regarding system development fees, impact fees, impact fee credits and water meter fees. The City determines all fees based on accurate information provided by the developer's consultants.

The initial plan review submittal must be a complete package. Contact the front counter staff or your Project Development Administrator for submittal requirements. The Plan Review Submittal Checklist is required for all submittals. A complete submittal could reduce the number of plan review re-submittals.

The following documents describe the specific City of Chandler requirements:

## ***Zoning Code Standard Details and Specifications***

*Technical Design Manuals 1 & 2 - Water & Wastewater System Design  
Technical Design Manual 3 - Drainage Policies and Standards  
Technical Design Manual 4 - Street Design and Access Control  
Technical Design Manual 5 - Traffic Signal Design  
Technical Design Manual 6 - Streetlight Design  
Technical Design Manual 7 - Traffic Barricade Design  
Technical Design Manual 8 - Landscape and Irrigation Design, Right-of-Way/Retention Basins/Parks  
Fire Department Plan Review Guides and Standard Details  
Stormwater Quality Protection Manual*

Mailing Address:  
P.O. Box 4008, MS 408  
Chandler, Arizona 85244-4008

**Transportation and Development Department  
Civil Engineering Plan Review  
215 E. Buffalo St., Chandler Arizona 85225**

Telephone: (480) 782-3000  
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[www.chandleraz.gov](http://www.chandleraz.gov)  
Form No. UDM-003/Civil  
Rev: 11-12-14

## Civil Plan Review Fees

Submit the plan review fee with the initial plan set.

Civil plan review fees are based upon the number of sheets submitted for review and approval. Each type of improvement plan (i.e. grading and drainage, water, sewer, right-of-way improvement) may be submitted separately or in combination. Fees are as follows:

\_\_\_\_\_ Civil engineering preliminary plat plan review fee: \$785 + \$7.85/lot

\_\_\_\_\_ Civil engineering final plat plan review fee: \$785 + \$7.85/lot

Improvement plans (including grading and drainage):	\$440 per sheet
Fourth and subsequent review fees:	\$150 per sheet
Plan revisions initiated by the developer or required due to an error or oversight of the developer after plans have been approved by the City Engineer	\$110 for each revision or set of revisions reviewed

## Buy-In Fees

Buy-in fees must be paid prior to formal plan approval. The actual buy-in assessments will be calculated during the formal plan review process.

Type	Location	Size	Length	Unit Cost	Cost
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

**Costs are subject to the fees in effect at the time of plan approval**

Check if Required	Description	Comments
_____	1. Refer to technical design manuals for plan preparation requirements.	
_____	2. The development is within a proposed freeway corridor. Please coordinate the development with ADOT.	
_____	3. The development is adjacent to a current City project or improvement district. Please coordinate your plans with City staff or consultant as noted.	
_____	4. The development is within an airport impact overlay district. An aviation easement form for the following airport must be submitted prior to plan approval. _____ Chandler Municipal Airport _____ Stellar Airpark	
_____	5. The developer must obtain approval from FAA, per FAA Regulation, Part 77, Notice to Construct. The City must receive a copy of the written approval from the FAA prior to plan approval. A bird mitigation study may be required if lakes are a part of the development.	
_____	6. A portion of the proposed development appears to be within the FEMA 100-year flood zone. Flood Control District of Maricopa County approval is required prior to plan approval.	
_____	7. Submit a separate Erosion and Sediment Control Plan. Refer to the City of Chandler Manual on Stormwater Quality Protection.	
_____	8. The following City Stormwater Master Plan requirements apply to the development: _____ _____ _____	
_____	9. The following additional storm water system requirements apply to the development: A. The drainage system must comply with the standards presented within the City's Technical Design Manual 3 – Drainage Policies and Standards. B. Easement dedication for on-site retention basins. C. All retention areas must comply with the aesthetic standards given within the City Zoning Code. Retention volumes must accommodate mounding in retention ponds. There are no exceptions to standards given within the City Zoning Code. Any required amenities must be above the 10-year retention level.	

Check if Required	Description	Comments
	<ul style="list-style-type: none"> <li>D. Amount of retention area allowed along the street frontage per the Zoning Code.</li> <li>E. Accommodate ½ street runoff and onsite retention plus 10%, retained entirely on private property.</li> <li>F. Maximum allowable depth of retention is 3 ft. for the 2-hour 100-year storm and 10%.</li> <li>G. Maximum side slopes are 4:1. Access to the bottom must be provided for maintenance vehicles not to exceed 10:1.</li> <li>H. Certified double-ring infiltrometer testing is required in the locations of each proposed basin. Basin drain shall be less than 36 hours based on 50% of percolation test rate.</li> <li>I. Water lines, water service lines, and fire protection lines may not cross under retention basins. This does not apply to paved areas used for retention or landscape irrigation lines downstream of the backflow prevention device. A concrete cap must protect sewer lines passing under retention basins.</li> <li>J. Underground retention is not allowed.</li> </ul>	
_____	<p>10. Elevations noted on the plans shall be based upon the NAVD 1988 datum.</p> <p>The nearest City CMCN benchmark shall be utilized with the proper conversion value to NAVD 88.</p> <p>The City's benchmark ID number (CMCN #) and verbatim description must match the latest edition of <i>City of Chandler Vertical Control Base List</i>, and must be shown on the cover sheet with the equation.</p>	
_____	<p>11. Show all existing wells and their Arizona Department of Water Resources registration numbers on the preliminary plat and on the plans. If not registered, so note on the plans. Register wells with the ADWR prior to any disposition, and provide documentation to the City. Contact Environmental Resources at 782-3582 to coordinate well registration and disposition.</p>	
_____	<p>12. The following improvements are required to existing streets and alleys adjacent to the development:</p> <ul style="list-style-type: none"> <li>A. Right-of-way dedication.</li> <li>B. Sidewalk installation.</li> <li>C. Additional pavement with curbing.</li> <li>D. Alley must be paved.</li> </ul>	

Check if Required	Description	Comments
	E. Streetlights must be installed.	
	F. A 4" traffic signal intertie or signal conduit is required	
_____	13. Proposed street geometrics must comply with the standards presented in the City's Technical Design Manual 4 - Street Design and Access Control.	
_____	14. A performance bond and liability insurance will be required for the permitted construction work (refer to the Offsite Construction Estimate for Civil Performance Bond Calculations). The City will determine the bond amount from the quantities listed in the Offsite Construction Estimate to be provided by the project engineer. The bonding is to cover work within the public right-of-way only.	
_____	15. Permit fees are based on the signed and sealed Certificate of Quantities form, which covers onsite and offsite work. Street cut permit fees for utility connections are based on the age of pavement being cut; a street bore or alternate connection is preferred.	
_____	16. All existing ditches and canals must be tiled or abandoned. This includes those adjacent to the street and those in SRP or RWCD right-of-way next to the development. Generally, relocated and tiled irrigation facilities shall be located out of the public R.O.W. The installation of linear park areas at major canals requires the approval of the Community Services Director and the City Engineer. The City will not be responsible for the maintenance or reconstruction of abandoned ditches. The following note must appear on the preliminary plat and the development plans: The improvements shown on this set of plans will not be fully approved by the City and the Certificate of Occupancy will not be issued until the irrigation facility undergrounding requirements have been satisfied.	
_____	17. The disposition of SRP irrigation facilities needs to be determined (prior rights easement, SRP fee, USA fee). SRP and City sharing of right-of-way needs approval by the City Engineer at the preliminary plat stage.	
_____	18. The City Engineer and the City Attorney must approve the abandonment of any existing right-of-way. City Council must approve by Ordinance a vacation plat prepared by a registered land surveyor. Contact the City's	

Check if Required	Description	Comments
_____	<p>Real Estate Office at 480-782-3390 for application and cost of application.</p> <p>19. The following subdivision requirements apply:</p> <ul style="list-style-type: none"> <li>A. A preliminary plat is required and must obtain technical review and approval before formal submittal of the improvement plans. Refer to the Preliminary Plat Review Checklist for technical content requirements. Contact planning staff for planning requirements. Council approval does not convey technical engineering review approval of the preliminary plat.</li> <li>B. Include the final plat with the first civil plan submittal.</li> <li>C. An amended plat or re-plat is required to be processed with the engineering plans.</li> <li>D. Provide a current title report, with a copy of all schedule "B" items (6 months old maximum).</li> </ul> <p>NOTE: Building permits will not be granted until a required final plat is recorded. Phasing of plats is not allowed.</p> <p>20. Right-of-way widths, street cross sections and alley cross sections must comply with City standards (please refer to Standard Details).</p> <p>21. The dedication of tracts or parcels to the City must be approved by the acquiring department.</p> <p>22. The City Engineer must approve the abandonment of any existing easements.</p> <p>23. At the time of plat staff approval, a Standard Owner's Policy Title Report (no older than 10 days) must be submitted with the mylars for signature.</p> <p>24. An ALTA survey shall be submitted when available.</p> <p>25. Provide for review a Phase I Environmental Assessment in compliance with ASTM Standard for Environmental Site Assessment: Phase I Environmental Assessment process (E-1527-93) at the time of preliminary plat submittal. Submit an original updated Phase I Environmental Assessment (no older than 90 days) naming the City as beneficiary with the plat mylars at the time of final plat approval.</p> <p>26. Streetlights are required on all streets adjacent to the development. Refer to Technical Design Manual 6 - Streetlight</p>	

Check if Required	Description	Comments
	<p>Design - for design requirements. Some general requirements are noted below:  Spacing, 180 to 200 ft.  Luminaire size.:  Local streets – 9,500 Lumen.  Collectors – 16,000 Lumen.  Arterials – 30,000 Lumen.  Luminaire mounting height.  Street light detail number for type of pole (SL1 for most installations, SL10 for City Center area, SL 16 for decorative poles on local or collector streets, or SL 17 where necessary along arterial streets for clearance from overhead power lines). Design must be in conformance with Appendix A/B of the Streetlight Standards. New installations are to be consistent with the existing lights wherever possible.  Must be installed at least 2.5 feet from the back of curb and 1 foot from sidewalks. Refer to Technical Design Manual 4 - Street Design and Access Control for approved locations.</p>	
_____	<p>27. The following improvements are required to proposed streets and alleys as a part of the development:  A. Right-of-way dedication.  B. Half-street improvements (24' from F/C minimum required).  C. Full street improvements.  D. Alley improvements.  E. Streetlights.  F. Bus bay.  G. 4" traffic signal intertie or future signalized intersection conduit installation.</p>	
_____	<p>28. The lot layout must accommodate handicap ramps at all the "T" intersections as well as at curb returns.</p>	
_____	<p>29. The following additional sewer system requirements:  A. The sanitary sewer system must comply with the standards presented within the City's Technical Design Manuals 1 &amp; 2 – Water &amp; Wastewater System Design.  B. Easement dedication for off-project public main extension.  C. Easement dedication for on-site public mains where private streets or drives are anticipated.</p>	
_____	<p>30. The following additional water system requirements apply to the development:</p>	

Check if Required	Description	Comments
	<ul style="list-style-type: none"> <li>A. The potable water system must comply with the standards presented in the City's Technical Design Manuals 1 &amp; 2 - Water &amp; Wastewater System Design.</li> <li>B. Easement dedication for off-project extensions.</li> <li>C. Easement dedication for on-site public mains/water meters when private streets or drives are anticipated.</li> <li>D. The development is within an area serviced by reclaimed water and special requirements may apply.</li> </ul>	
_____	31. The following City Wastewater Master Plan requirements apply to the development: <ul style="list-style-type: none"> <li>A. The development must sewer to the correct area as defined within the plan. Any deviation will require an in-depth engineering study and approval of the City Engineer.</li> <li>B. A lift station may be added.</li> <li>C. An interceptor must be extended/installed as required by the Master Plan.</li> <li>D. A wastewater infrastructure analysis must be submitted.</li> </ul>	
_____	32. A fire hydrant is required at the entrances to the subdivision.	
_____	33. The following City Water Master Plan requirements apply: <ul style="list-style-type: none"> <li>A. A water production well site is required.</li> <li>B. A transmission main must be installed (the City will consider participation in the construction cost).</li> <li>C. A dual 12" or a single 16" water main must be installed along a section line street.</li> <li>D. A 12" water main must be installed along a mid-section line street.</li> <li>E. An 8" water main must be installed along a quarter-section line street.</li> <li>F. The minimum public water line size is 6".</li> </ul>	
_____	34. Show the existing sewer main planned for the service of the development on the civil plans. In some cases, the buy-in fees will be controlled by the sewer main tied into. No initial phase will be allowed to sewer across an unimproved succeeding phase without the City Engineer's approval.	
_____	35. Submit a 200-scale photocopy of the development so that the City may assign street names.	



Check if Required	Description	Comments
<hr/>	36. Reclaimed water lines are required in the arterial street right-of-ways adjacent to this project. Show all existing and proposed reclaimed water lines on the plans. Install reclaimed water mains in locations per C-200 unless the City Engineer determines otherwise.	
<hr/>	37. This project will be required to use reclaimed water for irrigation. Refer to the Reclaimed Water Users Manual and the Reclaimed Water Service Agreement. A. Show reclaimed turn-out location and size. B. Properties that have reclaimed water service and domestic water service are required to install reduced pressure-principle backflow assemblies on the domestic water line.	
<hr/>	38. The overhead utility lines which are on the development site or within the street right-of-way adjacent to it must be underground.	
<hr/>	39. Relocate the 69KV power poles.	
<hr/>	40. Place the following note on the preliminary plat and development plans: The improvements shown on this set of plans will not be fully approved by the City and the Certificate of Occupancy will not be issued until the overhead utility line undergrounding and power pole relocation have been satisfied	
<hr/>	41. Proper turn-around facilities are required on dead-end streets and alleys.	
<hr/>	42. The following requirements apply to the proposed phasing: A. Construct all required offsite improvements within Phase I. B. Perform all grading within Phase I. C. Maintain dual access routes to all sections of the development at all times. D. A temporary turnaround is required. It must comply with FD141. E. The sewer system must be stubbed for future service connections. F. The water system must be completely looped with each phase. G. If a model home phase is anticipated, it must be shown. H. Pavement cutting of a prior phase shall be avoided.	

Check if Required	Description	Comments
<input type="checkbox"/>	43. The maintenance of landscaping within the public right-of-way shall be the responsibility of the adjacent lot owner or the Homeowners Association.	
<input type="checkbox"/>	44. The maintenance of retention basins shall be the responsibility of the Homeowners Association.	
<input type="checkbox"/>	45. Refer to the following for more information: <ul style="list-style-type: none"> <li>A. Phase I Environmental Assessment Guidelines</li> <li>B. Phase I Environmental Assessment Procedures</li> <li>C. Reclaimed Water Users Manual (contact Water Distribution, 480-782-3700)</li> <li>D. Submittal Checklists</li> <li>E. Certificate of Quantities</li> <li>F. Civil Improvements/Encroachment Permit Application</li> <li>G. Performance Bond Procedures</li> <li>H. Offsite Construction Estimate</li> <li>I. City Code, Chapter 40: H.O.A. Improvements</li> <li>J. Chandler City Code, Chapter 53: Reclaimed Water Services</li> </ul>	

**Requirements, forms and information may be found in the City's Unified Development Manual at <http://udm.chandleraz.gov>**